# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/847,382 | 05/03/2001 | Jeffrey Richard Conrad | 10006614-1 | 6078 |

7590          10/31/2007

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| ART UNIT | PAPER NUMBER |
|---|---|
| 2155 | |

| MAIL DATE | DELIVERY MODE |
|---|---|
| 10/31/2007 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on <u>24 September 2007</u>.

2a)☐ This action is **FINAL**.     2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-4,9,13,14,16,17 and 21-30* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,9,13,14,16,17 and 21-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

# Detailed Action

**Status of Claims:**

Claims 1-4, 9, 13-14, 16-17, 21-30 are pending in this Office Action.

Claims 1, 14, 17, 30 are amended.

Claims 5-8, 10-12, 15, 18-20 are cancelled.

## Response to Arguments

Applicant's arguments filed in the amendment filed 9/24/07, have been fully considered

but are found not persuasive. See Remarks below.

**Applicant's invention as claimed**:

## *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this
or a foreign country, before the invention thereof by the applicant for a patent.

**Claim 30 is rejected under 35 U.S.C. 102(a) as being anticipated by Huffaker et al
(June 3, 2000).**

Regarding claim 30, a method of providing information related to one or more networks

(Huffaker: page 1, Abstract: visualizing network data), the method comprising:

displaying on a display a plurality of filter criteria, wherein the plurality of filter criteria

comprises a selectable list of a plurality of status levels (Huffaker: page 10, Fig. 11; Page 3;

visualization features);

receiving a user selection of one or more of the plurality of filter criteria, including a selection of at least one of said status levels (Huffaker: page 10, Fig. 11; Page 3; visualization features);

retrieving network device information related to a plurality of network devices in said one or more networks which satisfy said selected filter criteria (Huffaker: pages 8-10; input data);

performing Boolean queries on said plurality of filter criteria in said retrieved network device information (Huffaker: page 7; coloring graph by data attributes – page 8, Fig. 10);

setting attributes for network devices based on data collected, wherein said data collected further comprises retrieved network device information and said Boolean queries of said plurality of filter criteria (Huffaker: page 7; coloring graph by data attributes – page 8, Fig. 10), and

creating for display on a single display page a visual representation of said network device information (Huffaker: pages 8-10; visualization features), said visual representation comprising a first segment which is visually distinguishable from a second network segment by indicia (Huffaker: Fig. 11 shows a network segments visually distinguishable by space and connection lines), wherein said visual representation of the first and second network segments comprises a plurality of icons representing the plurality of network devices which satisfy said selected filter criteria (Huffaker: pages 8-10; colors, paths, nodes), wherein the indicia does not connect any of the plurality of icons (Huffaker: Fig. 11) and wherein said visual representation illustrates connectivity of said displayed plurality of network devices and illustrates a first connection between the first and second network segments (Huffaker: Fig. 11).

## *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.


**Claims 1-4, 9-14, 16-19, 21-26 are rejected under 35 U.S.C. 103(a) as being unpatentable by Huffaker et al (June 3, 2000) in view of 7,127,743 by Khanolkar et al.**

Regarding claim 1,

The Huffaker reference teaches a method of providing information related to one or more networks (Huffaker: page 1, Abstract: visualizing network data), the method comprising:

displaying on a display a plurality of filter criteria (Huffaker: page 10, Fig. 11; Page 3; visualization features);

receiving a user selection of the plurality of filter criteria (Huffaker: page 10, Fig. 11; Page 3; visualization features),

retrieving network device information related to the plurality of network devices in said one or more networks which satisfy said criteria (Huffaker: pages 8-10; input data);

performing Boolean queries on said plurality of filter criteria in said retrieved network device information (Huffaker: page 7; coloring graph by data attributes – page 8, Fig. 10);

setting attributes for network devices based on data collected, wherein said data collected further comprises retrieved network device information and said Boolean queries of said plurality of filter criteria (Huffaker: page 7; coloring graph by data attributes – page 8, Fig. 10), and

creating for display on a single display page a visual representation of said network device information (Huffaker: pages 8-10; visualization features), said visual representation comprising a first segment which is visually distinguishable from a second network segment by indicia (Huffaker: Fig. 11 shows a network segments visually distinguishable by space and connection lines), wherein said visual representation of the first and second network segments comprises a plurality of icons representing the plurality of network devices which satisfy said filter criteria (Huffaker: pages 8-10; colors, paths, nodes), and wherein said visual representation illustrates connectivity of said displayed plurality of network devices and illustrates a first connection between the first and second network segments in order to provide a simplified view to optimize network resources (Huffaker: Fig. 11).

The Huffaker reference fails to teach at least one of device type and device status.

However, the Khanolkar reference teaches

displaying on a display a plurality of filter criteria, wherein in the plurality of filter criteria comprises a first selectable list of network device types (Khanolkar: col. 8, lines 66- col. 9, line 13; particular devices) and a second selectable list of a plurality of status levels for each of a plurality of network devices in said one or more networks (Khanolkar: col. 8, lines 66- col. 9, line 13; event types);

receiving a user selection of the plurality of filter criteria, including a selection of at least one of the network device types and at least one of said status levels (Khanolkar: col. 8, lines 66- col. 9, line 13) in order to allow the user to focus on a particular set of devices or events (Khanolkar: col. 9, lines 6-9).

It would have been obvious at the time of the invention to one of ordinary skill in the art to create the visual representation of the network as taught by Huffaker to include filter criteria as taught by Khanolkar because it would allow one to focus on a particular set of devices or events (Khanolkar: col. 9, lines 6-9).

Regarding claim 2, the method of claim 1, wherein said retrieving network device information comprises:

retrieving network segment information for each of said network devices which satisfy said filter criteria (Huffaker: filter to display; limiting display), said network segment information defining which of said first or second network segments to which said each of said network devices is physically connected (Fig.s 9-11).

Regarding claim 3, the method of claim 2, wherein said creating said visual representation of said network device information comprises:

creating said visual representation based on said retrieved network segment information (Huffaker: pages 8-10; input files; page 14).

Regarding claim 4, the method of claim 3, wherein said network segment information includes information related to said first or second segments, and wherein said creating said visual representation of said network device information comprises:

creating said visual representation whereby said visual representation is divided into said first or second segments (Huffaker: Fig. 5).


Regarding claim 9, the method of claim 1, wherein said retrieving network device information further comprises:

retrieving said network device information from a database (Huffaker: pages 1-2).


Regarding claim 10, the method of claim 1, wherein said plurality of filter criteria comprises:

at least one node type (Huffaker: page 3-5; root nodes- non-root nodes).


Regarding claim 11, the method of claim 10, wherein said plurality of filter criteria includes at least one node attribute (Huffaker: page 3-11).


Regarding claim 12, the method of claim 11, wherein said at least one node attribute comprises at least one node status (Huffaker: page 3-11; root or non-root).


Regarding claim 13, the method of claim 1, further comprising: displaying said visual representation (Huffaker: page 1; abstract).


Regarding claim 21, the method of claim 1, wherein the visual representation further comprises a third network which is visually distinguishable from the first and second network segments by indicia (Huffaker: Fig. 11 shows a network segments visually distinguishable by space and connection lines, different clusters connected through paths as seen).


Regarding claim 22, the method of claim 22, wherein said visual representation of the third network segment comprises a plurality of icons representing the plurality of network devices which satisfy said selected filter criteria, and wherein said visual representation illustrates

connectivity of said displayed plurality of network devices and illustrates a second connection

between the third network segment and either the first or second network segment (Huffaker:

Fig. 11 shows a network segments visually distinguishable by space and connection lines).

Regarding claim 27, the method of claim 1, wherein the indicia does not connect any of the

plurality of icons (Huffaker: Fig. 11).

Regarding claim 14, a network management node connected to one or more networks (Huffaker:

page 1, Abstract: visualizing network data), said network management node comprising:

      a plurality of modules stored on a computer readable medium (Huffaker: pages 1-2); and

      a database storing information related to a plurality of network devices in said one or

more networks (Huffaker: pages 1-2), wherein said plurality of modules are operable to

      displaying on a display a plurality of filter criteria (Huffaker: page 10, Fig. 11; Page 3;

visualization features);

      receiving a user selection of the plurality of filter criteria (Huffaker: page 10, Fig. 11;

Page 3; visualization features),

      store filter information regarding said selection of filter criteria in the database (Huffaker:

page 10; stored customized labels; otter storage);

      retrieve network device information based on said information from said database

(Huffaker: pages 8-10);

      <u>performing Boolean queries on said plurality of filter criteria in said retrieved network</u>

<u>device information</u> (Huffaker: page 7; coloring graph by data attributes – page 8, Fig. 10)<u>;</u>

      <u>setting attributes for network devices based on data collected, wherein said data collected</u>

<u>further comprises retrieved network device information and said Boolean queries of said</u>

<u>plurality of filter criteria </u>(Huffaker: page 7; coloring graph by data attributes – page 8, Fig. 10)<u>,</u>

<u>and</u>

      create a visual representation comprising a first network segment which is visually

distinguishable from a second network segment by indicia (Huffaker: pages 8-10; Fig. 11),

wherein said visual representation of the first or second network segments comprises a plurality

of icons representing the plurality of network devices which satisfy said filter criteria (Huffaker: Fig. 11 shows a network segments visually distinguishable by space and connection lines), and wherein said visual representation illustrates connectivity of said displayed plurality of network devices and illustrates a first connection between the first and second network segments (Huffaker: Fig. 11 shows a network segments visually distinguishable by space and connection lines).

The Huffaker reference fails to teach at least one of device type and device status.

However, the Khanolkar reference teaches

displaying on a display a plurality of filter criteria, wherein in the plurality of filter criteria comprises a first selectable list of network device types (Khanolkar: col. 8, lines 66- col. 9, line 13; particular devices) and a second selectable list of a plurality of status levels for each of a plurality of network devices in said one or more networks (Khanolkar: col. 8, lines 66- col. 9, line 13; event types);

receiving a user selection of the plurality of filter criteria, including a selection of at least one of the network device types and at least one of said status levels (Khanolkar: col. 8, lines 66- col. 9, line 13) in order to allow the user to focus on a particular set of devices or events (Khanolkar: col. 9, lines 6-9).

It would have been obvious at the time of the invention to one of ordinary skill in the art to create the visual representation of the network as taught by Huffaker to include filter criteria as taught by Khanolkar because it would allow one to focus on a particular set of devices or events (Khanolkar: col. 9, lines 6-9).

Regarding claim 16, the network management node of claim 14, further comprising:

a network interface operable to transmit said visual representation of said network device information over the Internet (Huffaker: Fig. 11).

Regarding claim 23, the network management node of claim 14, wherein the visual representation further comprises a third network which is visually distinguishable from the first and second network segments by indicia (Huffaker: Fig. 11).

Regarding claim 24, the network management node of claim 23, wherein said visual

representation of the third network segment comprises a plurality of icons representing the

plurality of network devices which satisfy said selected filter criteria, and wherein said visual

representation illustrates connectivity of said displayed plurality of network devices and

illustrates a second connection between the third network segment and either the first or second

network segment (Huffaker: Fig. 11).


Regarding claim 28, the network management node of claim 14, wherein the indicia does not

connect any of the plurality of icons (Huffaker: Fig. 11).



Regarding claim 17, a computer readable storage device on which is stored a program, the

program performing a method for providing information related to one or more networks

(Huffaker: page 1, Abstract: visualizing network data), the method comprising:

 displaying on a display a plurality of filter criteria (Huffaker: page 10, Fig. 11; Page 3;

visualization features);

 receiving a user selection of the plurality of filter criteria (Huffaker: page 10, Fig. 11;

Page 3; visualization features),

 retrieving network device information based on said selected criteria, said network device

information being related to one or more network devices in said the plurality of networks

(Huffaker: pages 8-10; input data);

 performing Boolean queries on said plurality of filter criteria in said retrieved network

device information (Huffaker: page 7; coloring graph by data attributes – page 8, Fig. 10);

 setting attributes for network devices based on data collected, wherein said data collected

further comprises retrieved network device information and said Boolean queries of said

plurality of filter criteria (Huffaker: page 7; coloring graph by data attributes – page 8, Fig. 10),

and

 creating a visual representation a first network segment which is visually distinguishable

from a second network segment by indicia (Huffaker: pages 8-10; Fig. 11), wherein said visual

representation of the first and second network segments comprises a plurality of icons

representing the plurality of network devices which satisfy said filter criteria (Huffaker: Fig. 11 shows a network segments visually distinguishable by space and connection lines), and wherein said visual representation illustrates connectivity of said displayed plurality of network devices and illustrates a first connection between the first and second network segments (Huffaker: Fig. 11 shows a network segments visually distinguishable by space and connection lines).

The Huffaker reference fails to teach at least one of device type and device status.

However, the Khanolkar reference teaches:

displaying on a display a plurality of filter criteria, wherein in the plurality of filter criteria comprises a first selectable list of network device types (Khanolkar: col. 8, lines 66- col. 9, line 13; particular devices) and a second selectable list of a plurality of status levels for each of a plurality of network devices in said one or more networks (Khanolkar: col. 8, lines 66- col. 9, line 13; event types);

receiving a user selection of the plurality of filter criteria, including a selection of at least one of the network device types and at least one of said status levels (Khanolkar: col. 8, lines 66- col. 9, line 13) in order to allow the user to focus on a particular set of devices or events (Khanolkar: col. 9, lines 6-9).

It would have been obvious at the time of the invention to one of ordinary skill in the art to create the visual representation of the network as taught by Huffaker to include filter criteria as taught by Khanolkar because it would allow one to focus on a particular set of devices or events (Khanolkar: col. 9, lines 6-9).

Regarding claim 18, the computer readable medium of claim 17, wherein said plurality of filter criteria comprises: at least one node type (Huffaker: page 3-5; root nodes- non-root nodes).

Regarding claim 19, the computer readable medium of claim 18, wherein said plurality of filter criteria comprises: node status, and at least one status level (Huffaker: page 3-5; root nodes- non-root nodes).

Regarding claim 25, the computer readable medium of claim 17, wherein the visual representation further comprises a third network which is visually distinguishable from the first and second network segments by indicia (Huffaker: Fig. 11).

Regarding claim 26, the computer readable medium of claim 25, wherein said visual representation of the third network segment comprises a plurality of icons representing the plurality of network devices which satisfy said selected filter criteria, and wherein said visual representation illustrates connectivity of said displayed plurality of network devices and illustrates a second connection between the third network segment and either the first or second network segment (Huffaker: Fig. 11).

Regarding claim 29, the computer readable storage device of claim 17, wherein the indicia does not connect any of the plurality of icons (Huffaker: Fig. 11).


## REMARKS

Applicant has amended the independent claims to include limitations regarding 'performing Boolean queries on filter criteria and setting attributes for network devices based on the data collected.'

**The Applicant Argues:**

The Huffaker and Khanolkar references do not teach the newly amended limitations.

**In response**, the examiner respectfully submits:

The examiner maintains the rejection with the Huffaker reference because it does teach the new limitations. Huffaker teaches "performing Boolean queries on said plurality of filter criteria in said retrieved network device information" in Huffaker: page 7; coloring graph by data attributes – page 8, Fig. 10. Huffaker teaches performing Boolean queries by using comparison operators on network data in order to filter and visualize the network data according to the users criteria. For example Huffaker color codes nodes, lines, and devices based on their corresponding network information. Huffaker also masks and hides data that does not meet the

determined criteria. These examples illustrate the step of performing Boolean queries on a plurality of filter criteria. The second amended limitation of "setting attributes for network devices based on data collected" is the designation and setting of color and position data by the Otter engine of Huffaker. The "data collected further comprises retrieved network device information and said Boolean queries of said plurality of filter criteria" is shown by the Otter engine of Huffaker retrieving the network data and applying the Boolean queries by way of the comparison operators to customize and visualize the network data.

The examiner has read applicant's remarks and while applicant cites the specification and fails to see the distinguishing features.
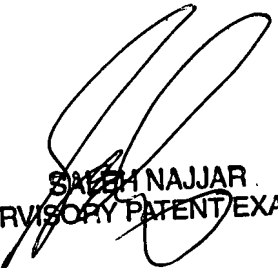

## Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin R. Bruckart whose telephone number is (571) 272-3982.  The examiner can normally be reached on 9:00-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571) 272-4006.  The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system.  Status information for published applications may be obtained from either Private PAIR or Public PAIR.  Status information for unpublished applications is available through Private PAIR only.  For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Benjamin R Bruckart
Examiner
Art Unit 2155

SALEH NAJJAR
SUPERVISORY PATENT EXAMINER